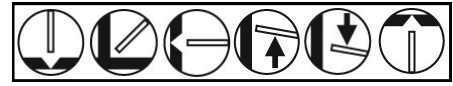


# FabCO<sup>®</sup> 991K2



AWS A5.29: E91T1-K2C H8, E91T1-K2M H8

## WELDING POSITIONS:



### FEATURES:

- Fast-freezing slag
- Low fumes and spatter
- Easy slag removal
- Good impact toughness at low temperatures

### BENEFITS:

- Excellent out-of-position capability
- Increases welder appeal and productivity
- Reduces clean-up time, minimizes risk of inclusions
- Resists cracking in severe applications

### APPLICATIONS:

- Single or multi-pass welding
- Shipbuilding
- High Strength Low-Alloy (HSLA) steels
- Heavy equipment and machinery
- Offshore
- Structural and bridge fabrication
- Quench & Tempered (Q&T) steels

**SLAG SYSTEM:** Fast-freezing, rutile-type, flux-cored wire

**SHIELDING GAS:** 100% Carbon Dioxide (CO<sub>2</sub>), 75% Argon (Ar)/25% Carbon Dioxide (CO<sub>2</sub>), 35-50 cfm (14-16 l/min)

**TYPE OF CURRENT:** Direct Current Electrode Positive (DCEP)

**STANDARD DIAMETERS:** 0.045" (1.2 mm), 1/16" (1.6 mm)

**RE-DRYING:** Not recommended

**STORAGE:** Product should be stored in a dry, enclosed environment, and in its original intact packaging

### TYPICAL WELD METAL CHEMISTRY\* (Chem Pad):

Weld Metal Analysis	100% CO <sub>2</sub>	75% Ar/25% CO <sub>2</sub>	AWS Spec
Carbon (C)	0.05	0.06	0.15
Manganese (Mn)	1.04	1.57	0.5-1.75
Silicon (Si)	0.19	0.35	0.80
Phosphorus (P)	0.009	0.009	0.030
Sulphur (S)	0.014	0.015	0.030
Molybdenum (Mo)	0.01	0.01	0.35
Nickel (Ni)	1.92	1.69	1.00-2.00

**Note:** AWS specification single values are maximums.

### TYPICAL DIFFUSIBLE HYDROGEN\*:

Hydrogen Equipment	100% CO <sub>2</sub>	75% Ar/25% CO <sub>2</sub>	AWS Spec
(GAS CHROMATOG-	5.5 ml/100g	6.3 ml/100g	8.0 ml/100g Maximum

### TYPICAL MECHANICAL PROPERTIES\* [Aged 48 Hrs.@220°F (105°C)]:

Mechanical Tests	100% CO <sub>2</sub>	75% Ar/25% CO <sub>2</sub>	AWS Spec
Tensile Strength	91,300 psi (629 MPa)	105,000 psi (724 MPa)	90,000-110,000 psi (620-760 MPa)
Yield Strength	81,700 psi (563 MPa)	91,600 psi (632 MPa)	78,000 psi (540 MPa) Minimum
Elongation % in 2" (50 mm)	25%	21%	17% Minimum

CVN Temperatures	100% CO <sub>2</sub>	75% Ar/25% CO <sub>2</sub>	AWS Spec
Avg. at 0°F (-18°C)	85 ft •lbs (115 Joules)	72 ft •lbs (98 Joules)	20 ft •lbs (27 Joules) Minimum
Avg. at -60°F (-51°C)	—	26 ft •lbs (35 Joules)	Not specified

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with AWS A5.29 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers Company.

# FabCO<sup>®</sup> 991K2

Diameter		Weld Position	Amps	Volts	Wire-Feed Speed		Deposition Rate		CTWD	
Inches	(mm)				in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
0.045	(1.2)	All Position	150	23	250	(6.4)	5.0	(2.3)	1/2	(13)
0.045	(1.2)	All Position	190	23	315	(8.0)	6.3	(2.9)	1/2	(13)
0.045	(1.2)	All Position	225	25	417	(10.6)	8.2	(3.7)	1/2	(13)
0.045	(1.2)	Flat & Horizontal	275	28	530	(13.5)	10.1	(4.6)	1/2	(13)
0.045	(1.2)	Flat & Horizontal	300	30	604	(15.3)	12.1	(5.5)	1/2	(13)
1/16	(1.6)	All Position	175	23	130	(3.3)	3.9	(1.8)	3/4	(19)
1/16	(1.6)	All Position	225	24	150	(3.8)	6.3	(2.9)	3/4	(19)
1/16	(1.6)	All Position	275	26	235	(6.0)	9.6	(4.4)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	350	29	335	(8.5)	13.6	(6.2)	3/4	(19)

- **Maintaining a proper welding procedure - including preheat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**
- **See Above:** This information was determined by welding with 100% CO<sub>2</sub> shielding gas with a flow rate between 35-40 cfh (14-16 l/min).
- **All positions include:** Flat, Horizontal, Vertical Up, Vertical Down, and Overhead.

**STANDARD DIAMETERS AND PACKAGES:** For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543 or (937) 332-5188 for International Customer Service.

Diameter		33-lb. (15kg) Spool
Inches	(mm)	
0.045	(1.2)	S285612-029
1/16	(1.6)	S285619-029

#### CONFORMANCES AND APPROVALS:

- **AWS A5.29**, E91T1-K2C H8, E91T1-K2M H8
- **AWS A5.29M**, E621T1-K2C H8, E621T1-K2M H8
- **ASME SFA 5.29**, E91T1-K2C H8, E91T1-K2M H8
- **CWB**, 100% CO<sub>2</sub>, E621T1-K2C-H8, 75-80% Ar/Bal. CO<sub>2</sub>, E621T1-K2M-H8 (1.2 mm – 1.6 mm diameter electrodes)
- **CWB**, E621T1-(C1A, M20A, M21A)-K2M-H8 (E91T1-K2M-H8)
- **ABS**, 100% CO<sub>2</sub>, E91T1-K2C H8
- **ABS**, 75% Ar/25% CO<sub>2</sub>, E91T1-K2M H8

**TECHNICAL QUESTIONS?** For technical support of Hobart Filler Metals products, contact the Applications Engineering department by phone toll-free at 1-800-532-2618 or by e-mail at [Applications.Engineering@hobartbrothers.com](mailto:Applications.Engineering@hobartbrothers.com)

#### CAUTION:

Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standard Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 8669 NW 36th St., Miami, FL 33166 (can also be downloaded online at [www.aws.org](http://www.aws.org)); OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service or at [www.hobartbrothers.com](http://www.hobartbrothers.com).

Because Hobart Brothers Company is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

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Revision Date: 210803 (Replaces 170214)

